LEED CERTIFICATION: 
USACE Expectations on MILCON Projects

Purpose

• Promote sustainable design and development principles and best practices

• Increase understanding for the expectations of A/E and Industry Partners

• Share resources for sustainable redevelopment

• Identify specific sustainable strategies for adoption into USACE design and development projects

“I recognize the right and duty of this generation to develop and use the natural resources of our land; but I do not recognize the right to waste them, or to rob, by wasteful use, the generations that come after use.”

Theodore Roosevelt
LEED CERTIFICATION: USACE Expectations on MILCON Projects

References

- US Army Sustainable Design and Development Policy
  - 26APR2000, Memo from the Office of the Assistant Secretary of the Army, Installations and Housing

- USACE Army LEED® Implementation Guide

- US Green Building Council
  - www.usgbc.org


The Office of the Assistant Chief of Staff for Installation Management, Directorate of Facilities and Housing provides policy and guidance on the Army’s commitment to use of SDD principles at the web address:

http://www.hqda.army.mil/acsimweb/fd/linksSDD.htm
LEED CERTIFICATION: USACE Expectations on MILCON Projects

Outline

• WHY? US Army Sustainable Design and Development Policy
• HOW? USACE Army LEED Implementation
• WHERE? Sustainable Development with the Kansas City District
• WHAT? Sustainable Design in Recent Projects

“The Army has led the nation in building an environmentally friendly and energy efficient future. SDD ensures the Army will continue to have a leadership role in constructing and operating sustainable installations & facilities.”

Office of the Assistant Secretary of the Army for Installations & Environment
US Army SDD Policy

• SDD “is the systematic consideration of current and future impacts...on the environment, energy use, natural resources, the economy and quality of life.

• “Guidance will ensure SDD is considered in Army installation planning decisions and infrastructure projects to the fullest extent possible…”

• Integrating SDD...will ensure the Army has a leadership role in constructing and operating sustainable, environmentally responsible, cost efficient installations and facilities.”
US Army SDD Policy

Projected Funding FY06-11 = $54.8B

FY06 FY07 FY08 FY09 FY10 FY11

Program ($Millions)
US Army SDD Policy

2000

SDD
ASA & ACSIM
ESTABLISH POLICIES

2001

SPIRiT
FY02 - BRONZE
FY06 - SILVER
FY06 - GOLD

2006

LEED
FY08 - SILVER
ALL PROJECTS SHALL BE REGISTERED
US Army SDD Policy

Current Requirements

- All new construction & major renovation – LEED-NC SILVER (minimum 33 LEED points)
- Army Family Housing & Residential Communities Initiative – still SPIRIT Gold
- 50% waste diversion mandatory; 30% energy reduction mandatory (EPAct)
- (USACE) LEED Accredited Professional (AP) required all design and construction teams
- Certifiable - “Able to achieve USGBC certification if submitted”

Coming Requirement: 5% of projects USGBC certified
USACE Army LEED Implementation

Background

• Guidance assists USACE Project Delivery Teams (PDTs) to meet the Army’s SDD policy

• Goal is to integrate Sustainable Design and Development concepts and practices into:
  – Installation planning and development actions
  – Infrastructure project life-cycle planning, programming, design, contract, construction, operation, maintenance, renovation, and disposal process
  – Projects at the fullest extent possible, balanced with funding constraints and customer requirements

The ACSIM is responsible for implementing the Army SDD policy and the USACE is providing the supporting technical guidance. The ACSIM and USACE have taken specific actions to include SDD into installation master plans, infrastructure projects, guide specifications, A&E selection criteria, value engineering, and construction contract language.
USACE Army LEED Implementation

Requirements

- New Construction - Starting with the FY08 program, all vertical construction projects with climate-controlled facilities will achieve the **SILVER** level of LEED-NC

- Renovation and Repair - Shall meet the same requirement as new construction when they:
  - Exceed the garrison commander authority AND
  - Have a repair to replacement ratio equal to or greater than 25 percent.
USACE Army LEED Implementation

Integrated Design

• All Project Delivery Teams will include a LEED Accredited Professional (LEED-AP) for both the design and construction phases

• A LEED-AP contributes to the PDT by:
  – Ensuring correct interpretation of LEED credit requirements by the PDT
  – Providing guidance and assistance to PDT members in developing suitable and complete documentation
  – Tracking overall LEED accomplishments
  – Monitoring individual actions of PDT members responsible for each specific LEED credit
Government Validation

- Claimed credits are validated via LEED Documentation
  - Every credit and prerequisite has specific documentation requirements
  - Cost of preparing LEED documentation is included in design and construction costs

- Each USACE District will review the project documentation to validate all credits, in accordance with the USGBC standard, from design through construction closeout

- Each District shall coordinate with the Installation Director of Public Works or the Reserve Component equivalent, the USACE Center of Standardization, the designer, and the builder to obtain consensus on the project score and rating

Each District, as the Authorized Design and Construction Agent, is ultimately responsible for ensuring correct interpretation and scoring in accordance with USGBC standards.
USACE Army LEED Implementation

USGBC Certification

- Currently, Army policy does not require formal third party certification of all projects by the USGBC
- PDT personnel may submit the project for certification or contracts may include a requirement for the Contractor to obtain USGBC certification

**Beginning in FY10, the Army plans to select a number of projects annually for formal USGBC Certification.**
Sustainable Development with the Kansas City District

Spectrum of Infrastructure

**Warrior in Transition Complex**
Area Development Plan

**Whitside Barracks**
Digital Rendering

**Soldier Family Care Clinic**
High-Performance Envelope Details

**1st ID Headquarters**
Completed Facility
Sustainable Development with the Kansas City District

Planning Charrette

- Establish a strategy for meeting the sustainability goals for the project, identify all individual credits feasible to reach the goal, and ensure first costs associated with this strategy are captured in the DD Form 1391. The strategy will be captured on the LEED Project Checklist.

- Under the primary facilities cost, a separate line item will be added labeled “SDD & EPAct05.” This cost line item will include the “additional costs” associated with achieving this policy. “Additional costs” is defined as the added cost to raise a facility’s LEED rating from Certified to Silver.

The quality of this effort greatly influences the project’s success in achieving SDD goals.
Sustainable Development with the Kansas City District

Design Charrette

- Refine the target sustainability credit goals for the project as identified in the planning charrette and provide an updated LEED Project Checklist.

- Re-validate and update the cost data created during the Initial Project Programming/Planning Charrette. Projects claiming additional costs (over 2% of the primary facilities cost) for meeting a Silver Rating shall include a fully completed Sustainable Cost Template with the Budget Cost Estimates/Parametric Estimates submittal.

The updated LEED Project Checklist shall be endorsed by the Installation DPW, the COS, and the Kansas City District.
Design Build RFP

- Generally, the minimum score requirement is indicated and Offerors are given maximum latitude to develop the overall credit strategy based on project opportunities and the Offeror’s experience and strengths.

- The Contractor shall provide a LEED AP assigned to the project through closeout.

- Proposals should illustrate the Contractor’s past LEED experience, plan and internal monitoring system to meet LEED requirements and identification of key responsible personnel to include the LEED AP and Commissioning Authority, as applicable.

Registration is required. The Design Build Agent will typically administer the online project.
Sustainable Development with the Kansas City District

Design

- The Design Agent and DPW will review and comment on the design and the LEED supporting documentation and may audit individual credits where deemed necessary.

- Supporting documentation is a separable portion of Design Analysis provided with each required design submittal. Final design submittal for each portion of the work shall include all required design documentation.

- Design review conferences will include discussion of and resolution of all review comments to ensure consensus on achieving credit requirements and satisfactory documentation.

LEED will be used at 100% project design to establish a final design interim score and rating.
Sustainable Development with the Kansas City District

Construction

- Preconstruction Conference agendas will include discussion of roles and responsibilities, goals and compliance requirements, coordination issues, possible problem areas, and review of documentation requirements relating to LEED.

- The majority of the construction phase supporting documentation is a separable closeout submittal. Contractor shall update the documentation on at least a monthly basis and make it available for review by the PM, Construction Agent and DPW on the jobsite at all times during construction.

- Monthly or quarterly review of LEED documentation by Construction Agent staff is recommended.

**LEED will be used at BOD/Construction Closeout to verify the final design LEED score and establish a final LEED project rating.**
Whitside Barracks
Fort Riley, KS

50% of building materials manufactured within 500 miles

80% of site restored with native planting

33% energy cost savings
Prime Power School
Fort Leonard Wood, MO

100% of roof materials provide high reflectivity

92% of interior spaces have outdoor views

35% less water use
Soldier Family Care Clinic
Fort Riley, KS

- 425% of the building footprint set aside for open space
- 100% of interior spaces designated tobacco-free
- 30% less water use
Chemical BN Complex
Fort Lewis, WA

5% of on-site parking designated for fuel-efficient vehicles

95% of site stormwater diverted to a bio-diverse eco-park

30% energy cost savings
Case Study: Green Development at Fort Riley

Summary

- The US Army has developed a Sustainable Design and Development Policy, which the Corps of Engineers adheres to:
  - Reduce demands on limited resources
  - Reduce total ownership cost of facilities
  - Improve energy efficiency and water conservation
  - Provide safe, healthy, and productive built environments
  - Promote sustainable environmental stewardship
  - Reduce environmental impact/footprint of operations

“The earth belongs to each generation during its course – no generation can contract debts greater than may be paid during the course of its own existence”

Thomas Jefferson
THANK YOU

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